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EXAMINER
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MORRISON, THOMAS A

ART UNIT	PAPER NUMBER
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3653

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/759,262

Applicant(s)

KONDRATUK ET AL.

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 22-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the upstream end" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the plenum vacuum" in line 9. There is insufficient antecedent basis for this limitation in the claim.

With regard to claim 1, it is unclear what is meant by the recited "plenum vacuum connection". Is this a connection between the sheet and the vacuum channel as the sheet moves along the channel?

Claim 2 recites the limitation "the plenum surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the upstream end" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the leading edge" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the trailing edge" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the plenum surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the plenum surface" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the plane" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the surface" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the plenum surface" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the valve plate" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the plenum surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the plenum surface" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the vacuum opening" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the control valve" in line 2. It is unclear which control valve is referred to in claim 9, since claim 9 depends from claims 8 and 2 and claim 2 already recites "the control valves".

Claim 10 recites the limitation "the plenum surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 13, it is unclear what is meant by the recited "pair of laterally spaced, **coplanar**, parallel driven flat **coplanar** conveyer belts". (emphasis added).

Claim 13 recites the limitation "said flat" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the direction" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 initially recites "a plurality of vacuum control valves" in line 7. Then claim 13 recites "the valve" in line 11. It is unclear which one of the valves is referred to in line 11 of claim 13.

Claim 13 initially recites "a plurality of vacuum control valves" in line 7. Then claim 13 recites "the valve" in line 13. It is unclear which one of the valves is referred to in line 13 of claim 13.

Claim 13 recites the limitation "the upstream valve" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "the downstream direction" in lines 18-19. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the plenum surface" in lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the plenum surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the surface" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites "the valve is open" in line 4. It is unclear which one of the valves, previously recited in claims 14 and 13, is referred to in claim 15.

Claim 16 recites the limitation "the plenum surface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 18 recites the limitation "the vacuum starter opening" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

In claim 18, it is unclear what is meant by the recited "laterally vacuum channel" in line 3.

Claim 19 recites the limitation "the plenum surface" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the serially adjacent vacuum channels" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "said selected channel" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the next selected channel" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the plenum surface" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the vacuum opening" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "said vacuum opening" in line 6. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 and 7-14 and 16-20, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuzniak in view of Louis et al. In particular, Kuzniak in view of Louis et al. meets all of the limitations of claims 1-5 and 7-14 and 16-20.

Regarding the independent claim 1, Figs. 1-4 of Kuzniak disclose a self-valving vacuum distribution system for a sheet transfer apparatus including

a vacuum plenum (1) having a flat surface (bottom surface) over which spaced rotating members (11) operate to define an open vacuum channel (3); and,

vacuum control valves (including 9a and 9b) spaced along the channel (3) in the flat plenum surface, the valves (including 9a and 9b) held closed by a high pressure differential between the vacuum plenum (1) and the open vacuum channel (3)(see, e.g.,

column 4, lines 38-42 for an explanation of the claimed high pressure differential) and biased to open under a reduced pressure differential between the vacuum plenum (1) and the vacuum channel (3)(see, e.g., column 2, lines 30-33 and column 4, lines 59-66 for an explanation of the reduced pressure differential), the reduced pressure differential provided by a plenum vacuum connection to the upstream end of the vacuum channel (3) when the channel is covered by a sheet (13) carried over the channel (3). As best understood, Figs. 2 and 3 show a plenum vacuum connection to the upstream end (near 6a) of the vacuum channel (3) when the channel (3) is covered by a sheet (13), as claimed. The open vacuum channel permits the plenum vacuum to move downstream as the channel is covered. See, e.g., column 2, lines 44-47 and column 4, line 58 to column 5, line 13. Kuzniak includes rotating members (11) that convey the sheets (13), but does not disclose that the rotating members are conveyer belts, as claimed.

Louis et al. discloses a conveyer apparatus that includes a support with controlled suction valves (including 16 and 17) and a plurality of spaced apart conveyer belts (6) surrounding the support. More specifically, Louis et al. explains that, it is necessary for sheets to be positioned accurately in relation to each other on the conveying apparatus, and for them to follow exactly the motion of translation communicated to them by the conveyor in time and space. After this, Louis et al. explains that several different types of arrangements of rotating devices are suitable to perform this operation. See column 1, lines 12-42. It would have been obvious to one of ordinary skill in the art at the time of the invention, to substitute rotating devices (11) of Kuzniak with spaced apart belts, because this merely involves replacing one type of



conveying device with another type of conveying device that is equally suitable for controlling the positioning of sheets, as taught by Louis et al.

Regarding claim 2, Figs. 1-4 of Kuzniak show a vacuum starter opening (7) in the plenum surface upstream of the control valves (including 9a and 9b) providing initial vacuum communication between the plenum (1) and the upstream end of the vacuum channel (3).

Regarding claim 3, Fig. 1 of Louis et al. shows that it is well known to provide a conveying apparatus with an infeed device (including 2) adapted to move a line of spaced sheets (3) in series into contact with the conveyor belts (6). Louis et al. explains that such a device cuts and feeds sheets. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the Kuzniak apparatus with such a device in order to cut sheets into required widths and then feed the sheets, as taught by Louis et al. See column 2, lines 10-18. Providing such a device on the Kuzniak apparatus will result in the leading edge of each sheet to override the vacuum starter opening (7) of Kuzniak and each control valve of Kuzniak in succession, thereby progressively covering the vacuum channel (3) of Kuzniak and reducing the pressure differential to the reduced level allowing the valves (including 9a and 9b) to be biased open. See, e.g., Fig. 3 of Kuzniak.

Regarding claim 4, Kuzniak discloses that the passage of the trailing edge of each sheet (13) over the control valves (including 9a and 9b) causes the valves to progressively close. See, e.g., column 4, lines 38-52.

Regarding claim 5, Figs. 1 and 2 of Louis et al. show that the conveyer belts (6) have flat coplanar conveying surfaces and show that providing the conveyor belts (6) on the Kuzniak apparatus according to the teachings of Louis et al. will result in the plenum surface being between the belts and being recessed from the conveying surfaces to form the vacuum channel.

Regarding claims 7 and 17, Fig. 2 of Louis et al. shows that it is well known to provide a conveying apparatus with a plurality of laterally adjacent vacuum channels (13), that each channel (13) provides support for an incremental width of a sheet (3), and that a vacuum plenum (15) is operatively connected to the adjacent vacuum channels. Fig. 2 shows that such an arrangement allows a plurality of sheets to be conveyed at the same time. It would have been obvious to one of ordinary skill in the art at the time of the invention, to provide the Kuzniak apparatus with laterally adjacent vacuum channels in a manner as taught by Louis et al. to convey a plurality of sheets at the same time, as taught by Louis et al.

Regarding claim 8, Figs. 1-4 of Kuzniak show that each of the control valves (including 9a and 9b) includes a vacuum opening in the plenum surface providing vacuum communication between the plenum (1) and the vacuum channel (3), and a valve plate (e.g., 9a) attached to the plenum surface (near 10a) and operative to seal the vacuum opening against the valve bias at the high pressure differential.

Regarding claim 9, Fig. 2 of Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13) that are all connected together. As such, providing multiple vacuum channels of the Kuzniak apparatus

adjacently in a manner as taught by Louis et al. will result in an arrangement in which a starter vacuum conduit (near 1a) of Kuzniak, which is controlled by the control valve (e.g., 9a), provides the plenum vacuum pressure to the starter opening of the next laterally adjacent vacuum channel when the sheet (13) is wide enough to cover the next adjacent vacuum channel. In particular, the starter channels of the adjacent arrangements will be connected together as taught by Louis et al.

Regarding claim 10, as mentioned above, Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13) that are all connected together. As such, providing a plurality of the vacuum channels of the Kuzniak apparatus adjacently in a manner as taught by Louis et al. will result in the starter vacuum conduit (near 1a) of Kuzniak including a vacuum inlet end (near 9a) in the plenum surface and a vacuum outlet end having an open connection to the vacuum starter opening in the next adjacent vacuum channel. More specifically, the adjacent channel arrangements will all be in communication with each other. Also, the valve plate (e.g., 9a) will be operative to close the inlet end (e.g., near 9a) at the high pressure differential and to open the inlet end at the reduced pressure differential.

Regarding claim 11, as mentioned above, Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13) that are connected together. As such, providing a plurality of the vacuum channels of the Kuzniak apparatus adjacently in a manner as taught by Louis et al. will result in a starter vacuum conduit connecting the plenum surfaces of each pair of laterally adjacent

vacuum channels. More specifically, all of the adjacent channel arrangements will be in communication with each other, as taught by Louis et al.

Regarding claim 12, again, Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13) that are connected together. As such, providing a plurality of the vacuum channels of the Kuzniak apparatus adjacently in a manner as taught Louis et al. will result in a vacuum starter opening in each third vacuum channel and starter vacuum conduit operatively connecting each vacuum starter opening with the next two adjacent vacuum channels. More specifically, Louis et al. appears to show adjacent vacuum channels (13) are all the same and that are connected together. As such, providing a plurality of the vacuum channels of the Kuzniak apparatus adjacently in a manner as taught by Louis et al. will result in the Kuzniak apparatus having adjacent vacuum channels that are all the same and all in communication with each other. In other words, every vacuum channel will have a starter opening and a starter vacuum conduit in communication with all of the other adjacent vacuum channels. With every vacuum channel being the same, every third vacuum channel will satisfy the claimed limitation.

Regarding claim 13, Figs. 1-4 of Kuzniak show a sheet-actuated vacuum assisted sheet conveyor for the continuous transfer of sheets delivered in serial spaced relation, the conveyor including

a plurality of spaced rotating members (11) operating over a flat surface (including 3 and 6a) of a vacuum plenum (1);

a plurality of vacuum control valves (including 9a and 9b) in the flat spaced in the direction of movement of the rotating members (11) and providing vacuum communication between the plenum (1) and a vacuum channel (3);

the control valves (including 9a and 9b) operative to be held closed by a negative pressure in the plenum (1) sufficient to create a first pressure differential across the valve (including 9a and 9b)(see, e.g., column 4, lines 38-42), the valves (including 9a and 9b) including means for biasing the valves to open for vacuum communication at a second pressure differential across the valve (including 9a and 9b) less than the first pressure differential (see, e.g., Figs. 2-3 and column 4, lines 58-66);

means for applying the plenum vacuum (including 4) to an upstream end of the vacuum channel (3) such that, as a sheet (13) moves to progressively cover the vacuum channel (3), vacuum pressure in the channel (3) moves in the downstream direction with the sheet (13) to cause the pressure differential across each valve (including 9a and 9b) in succession to decrease to the second pressure differential and the valves (including 9a and 9b) to serially open, thereby applying the plenum vacuum directly to the sheet (13) to hold the same against and to move with the rotating members (11). See, e.g., Fig. 3 and column 4, line 58 to column 5, line 2. Kuzniak discloses the rotating members (11), but does not specifically disclose conveyer belts, as claimed. Also, Kuzniak does not specifically show means for moving sheets into planar contact with the conveyer belts. In addition, Kuzniak discloses means for applying the plenum vacuum (including 4) to an upstream end of the vacuum channel,

but does not specifically show the location of the means for applying the plenum vacuum, as claimed.

Louis et al. discloses a conveyer apparatus that includes a support with controlled suction valves (including 16 and 17) and a plurality of spaced apart conveyer belts (6) surrounding the support. Also, Fig. 2 of Louis et al. shows that the belts (6) operate over a surface of a vacuum plenum and that the vacuum plenum surface between the belts (6) is recessed to define a vacuum channel (e.g., 13). In addition, Fig. 1 of Louis et al. shows that it is well known to provide a conveying apparatus with means for moving sheets (including 2) into contact with the conveyer belts (6). As mentioned above with regard to claim 1, it would have been obvious to one of ordinary skill in the art at the time of the invention, to replace the rotating devices (11) of Kuzniak with spaced apart belts, because this merely involves replacing one type of conveying device with another type of conveying device that is equally suitable for controlling the positioning of sheets, as taught by Louis et al. Providing the Kuzniak apparatus with belts according to the teachings of Louis et al. will result in the belts being laterally spaced and being driven over a surface of the vacuum plenum (1) of Kuzniak. See Fig. 2 of Louis et al. Also, modifying Kuzniak in a manner as taught by Louis et al. will result in the plenum surface between the belts being recessed from the belts to define a vacuum channel. See Fig. 2 of Louis et al. As mentioned above with regard to claim 3, it also would have been obvious to one of ordinary skill in the art at the time of the invention to provide the Kuzniak apparatus with means for moving sheets into contact with the conveyer belts, in order to cut sheets into required widths and then feed the

sheets, as taught by Louis et al. Moreover, Fig. 3 of Kuzniak clarifies that sheets fed thereto progressively cover the vacuum channel (3). Regarding the claimed location of the means for applying the plenum vacuum, this is merely a design choice within the skill of one of ordinary skill in the art. Kuzniak and Louis et al. show different convenient locations for vacuum sources.

Regarding claim 14, Figs. 1-4 of Kuzniak show that the vacuum control valves (including 9a and 9b) each include a vacuum opening (near 9a) in the plenum surface (including 3 and 6a) of the vacuum channel (3); and,

a valve plate (e.g., 9a) attached to the plenum surface and operative to seal the vacuum opening against the valve bias at the first pressure differential.

Regarding claim 16, Fig. 2 of Kuzniak shows that the means for applying the plenum vacuum pressure (including 4) to the upstream end of the vacuum channel (3) includes a vacuum starter opening (7) in the plenum surface.

Regarding claim 18, Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13). Also, Louis et al. appears to show that all of the adjacent vacuum channels (13) are the same and that they are connected together. As such, providing a plurality of the vacuum channels of the Kuzniak apparatus adjacently as taught by Louis et al. will result in the Kuzniak apparatus having adjacent vacuum channels that are all the same and are all connected together. In other words, the vacuum starter opening (7) of each of the vacuum channels will be connected by a starter vacuum conduit (near 1a) to a laterally vacuum channel such that plenum vacuum pressure in the laterally adjacent channel, when the control valve

(e.g., 9b) for the channel to which the laterally adjacent channel is connected is open, is communicated to the starter opening (7) of the laterally adjacent channel.

Regarding claim 19, as mentioned above, Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13) that are the same and are connected together. As such, providing the vacuum chamber arrangement of Kuzniak in a manner as taught by Louis et al. will result in each starter vacuum conduit (near 1a) including a vacuum inlet end in the plenum surface of the directly adjacent vacuum channel.

Regarding claim 20, again, Louis et al. shows that it is well known to provide a conveyer apparatus with adjacent vacuum channels (13) that are the same and are connected together. As best understood, providing the vacuum chamber arrangement of Kuzniak in a manner as taught by Louis et al. will result in a vacuum starter opening (7) in each of a selected number of non-adjacent channels and a starter vacuum conduit operatively connecting each of the vacuum starter openings (7) in each of the selected non-adjacent channels with the serially adjacent vacuum channels between the selected channel and the next selected channel. More specifically, all of the vacuum channel arrangements will be connected and will be in communication with each other, which will meet the claimed limitations.

Regarding claim 21, Fig. 8 of Kuzniak shows that each of the vacuum control valves (including 9a and 9b) includes a vacuum opening in the plenum surface (including 3 and 6a) of the vacuum channel (3); and,

a poppet valve having a valve head (e.g., 9a) adapted to cover and close the



vacuum opening (near 9a) at the first pressure differential, and a valve spring (including 23) operative to bias the valve head (e.g., 9a) to open the vacuum opening (near 9a) at the second pressure differential.

***Allowable Subject Matter***

3. Claims 6 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Also, these claims need to be amended to overcome the 35 U.S.C. 112, second paragraph rejections above.

***Response to Amendment***

4. Applicants' arguments filed July 8, 2005 have been fully considered but they are not persuasive.

Applicants argue that Kuzniak has no vacuum channel that is the same or equivalent to applicants' vacuum channel 22 by which the vacuum pressure utilized to generate the reduced pressure differential between the vacuum plenum and the vacuum channel functions sequentially to move downstream with the moving sheet and successively open each vacuum control valve 34.

In response, it is the examiner's position that such feature is disclosed, e.g., in Figs. 2-3, column 2, lines 44-47 and column 4, line 58 to column 5, line 13. See also the obviousness rejection outlined above.

In response the applicants' arguments about the open vacuum channel, it is unclear which specific claims applicants are referring to in such arguments. Also, it is unclear which limitations applicants are trying to argue. If applicants are trying to argue

that the vacuum channel is not open, it is noted that at least Fig. 1 shows a situation where air can pass through channel (3) and through the valves into the vacuum plenum (1). As such, the channel (3) can be open. All of the limitations of the rejected claims are outlined in the rejection above.

### ***Conclusion***


5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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